

FIG. 1A

CACGAGGGAG CGCTAACGTC TTTCTGTCTC CCGCGGTGG TG ATG ACG GTG AAA	54
Met Thr Val Lys	
1	
ACT GAG GCT GCT AAG GGC ACC CTC ACT TAC TCC AGG ATG AGG GGC ATG	102
Thr Glu Ala Ala Lys Gly Thr Leu Thr Tyr Ser Arg Met Arg Gly Met	
5 10 15 20	
GTG GCA ATT CTC ATC GCT TTC ATG AAG CAG AGG AGG ATG GGT CTG AAC	150
Val Ala Ile Leu Ile Ala Phe Met Lys Gln Arg Arg Met Gly Leu Asn	
25 30 35	
GAC TTT ATT CAG AAG ATT GCC AAT AAC TCC TAT GCA TGC AAA CAC CCT	198
Asp Phe Ile Gln Lys Ile Ala Asn Asn Ser Tyr Ala Cys Lys His Pro	
40 45 50	
GAA GTT CAG TCC ATC TTG AAG ATC TCC CAA CCT CAG GAG CCT GAG CIT	246
Glu Val Gln Ser Ile Leu Lys Ile Ser Gln Pro Gln Glu Pro Glu Leu	
55 60 65	
ATG AAT GCC AAC CCT TCT CCT CCA CCA AGT CCT TCT CAG CAA ATC AAC	294
Met Asn Ala Asn Pro Ser Pro Pro Pro Ser Pro Ser Gln Gln Ile Asn	
70 75 80	
CTT GGC CCG TCG TCC AAT CCT CAT GCT AAA CCA TCT GAC TTT CAC TTC	342
Leu Gly Pro Ser Ser Asn Pro His Ala Lys Pro Ser Asp Phe His Phe	
85 90 95 100	

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FIG. 1B

TTG AAA GTG ATC GGA AAG GGC AGT TTT GGA AAG GTT CTT CTA GCA AGA	390
Leu Lys Val Ile Gly Lys Gly Ser Phe Gly Lys Val Leu Leu Ala Arg	
105 110 115	
CAC AAG GCA GAA GAA GTG TTC TAT GCA GTC AAA GTT TTA CAG AAG AAA	438
His Lys Ala Glu Glu Val Phe Tyr Ala Val Lys Val Leu Gln Lys Lys	
120 125 130	
GCA ATC CTG AAA AAG AAA GAG GAG AAG CAT ATT ATG TCG GAG CGG AAT	486
Ala Ile Leu Lys Lys Lys Glu Glu Lys His Ile Met Ser Glu Arg Asn	
135 140 145	
GTT CTG TTG AAG AAT GTG AAG CAC CCT TTC CTG GTG GGC CTT CAC TTC	534
Val Leu Leu Lys Asn Val Lys His Pro Phe Leu Val Gly Leu His Phe	
150 155 160	
TCT TTC CAG ACT GCT GAC AAA TTG TAC TTT GTC CTA GAC TAC ATT AAT	582
Ser Phe Gln Thr Ala Asp Lys Leu Tyr Phe Val Leu Asp Tyr Ile Asn	
165 170 175 180	
GGT GGA GAG TTG TTC TAC CAT CTC CAG AGG GAA CGC TGC TTC CTG GAA	630
Gly Gly Glu Leu Phe Tyr His Leu Gln Arg Glu Arg Cys Phe Leu Glu	
185 190 195	

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FIG. 1C

CCA CGG GCT CGT TTC TAT GCT GCT GAA ATA GCC AGT GCC TTG GGC TAC	678
Pro Arg Ala Arg Phe Tyr Ala Ala Glu Ile Ala Ser Ala Leu Gly Tyr	
200 205 210	
CTG CAT TCA CTG AAC ATC GTT TAT AGA GAC TTA AAA CCA GAG AAT ATT	726
Leu His Ser Leu Asn Ile Val Tyr Arg Asp Leu Lys Pro Glu Asn Ile	
215 220 225	
TTG CTA GAT TCA CAG GGA CAC ATT GTC CTT ACT GAT TTC GGA CTC TGC	774
Leu Leu Asp Ser Gln Gly His Ile Val Leu Thr Asp Phe Gly Leu Cys	
230 235 240	
AAG GAG AAC ATT GAA CAC AAC AGC ACA ACA TCC ACC TTC TGT GGC ACG	822
Lys Glu Asn Ile Glu His Asn Ser Thr Thr Ser Thr Phe Cys Gly Thr	
245 250 255 260	
CCG GAG TAT CTC GCA CCT GAG GTG CTT CAT AAG CAG CCT TAT GAC AGG	870
Pro Glu Tyr Leu Ala Pro Glu Val Leu His Lys Gln Pro Tyr Asp Arg	
265 270 275	
ACT GTG GAC TGG TGG TGC CTG GGA GCT GTC TTG TAT GAG ATG CTG TAT	918
Thr Val Asp Trp Trp Cys Leu Gly Ala Val Leu Tyr Glu Met Leu Tyr	
280 285 290	
GGC CTG CCG CCT TTT TAT AGC CGA AAC ACA GCT GAA ATG TAC GAC AAC	966
Gly Leu Pro Pro Phe Tyr Ser Arg Asn Thr Ala Glu Met Tyr Asp Asn	
295 300 305	
ATT CTG AAC AAG CCT CTC CAG CTG AAA CCA AAT ATT ACA AAT TCC GCA	1014
Ile Leu Asn Lys Pro Leu Gln Leu Lys Pro Asn Ile Thr Asn Ser Ala	
310 315 320	

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FIG. 1D

AGA CAC CTC CTG GAG GGC CTC CTG CAG AAG GAC AGG ACA AAG CGG CTC	1062
Arg His Leu Leu Glu Gly Leu Leu Gln Lys Asp Arg Thr Lys Arg Leu	
325 330 335 340	
GGG GCC AAG GAT GAC TTC ATG GAG ATT AAG AGT CAT GTC TTC TTC TCC	1110
Gly Ala Lys Asp Asp Phe Met Glu Ile Lys Ser His Val Phe Phe Ser	
345 350 355	
TTA ATT AAC TGG GAT GAT CTC ATT AAT AAG AAG ATT ACT CCC CCT TTT	1158
Leu Ile Asn Trp Asp Asp Leu Ile Asn Lys Lys Ile Thr Pro Pro Phe	
360 365 370	
AAC CCA AAT GTG AGT GGG CCC AAC GAG CTA CGG CAC TTT GAC CCC GAG	1206
Asn Pro Asn Val Ser Gly Pro Asn Glu Leu Arg His Phe Asp Pro Glu	
375 380 385	
TTT ACC GAA GAG CCT GTC CCC AAC TCC ATT GGC AAG TCC CCT GAC AGC	1254
Phe Thr Glu Glu Pro Val Pro Asn Ser Ile Gly Lys Ser Pro Asp Ser	
390 395 400	
GTC CTC GTC ACA GCC AGC GTC AAG GAA GCT GCC GAG GCT TTC CTA GGC	1302
Val Leu Val Thr Ala Ser Val Lys Glu Ala Ala Glu Ala Phe Leu Gly	
405 410 415 420	
TTT TCC TAT GCG CCT CCC ACG GAC TCT TTC CTC TGAACCCCTGT TAGGCCTTGG	1355
Phe Ser Tyr Ala Pro Pro Thr Asp Ser Phe Leu	
425 430	

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FIG. 1E

TTTTAAAGGA TTTTATGTGT GTTTCGGAAT GTTTAGTTA GCCTTTTGGT GGAGCCGCCA	1415
GCTGACAGGA CATCTTACAA GAGAATTTCG ACATCTCTGG AAGCTTAGCA ATCTTATTGC	1475
ACACTGTTCTG CTGGAATTTT TTGAAGAGCA CATTCTCCTC AGTGAGCTCA TGAGGTTTTT	1535
ATTTTTATTTC TTCCTTCCAA CGTGGTGCTA TCTCTGAAAC GAGCGTTAGA GTGCCGCCTT	1595
AGACGGAGGC AGGAGTTTCG TTAGAAAGCG GACCTGTTCT AAAAAAGGTC TCCTGCAGAT	1655
CTGTCTGGGC TGTGATGACG AATATTATGA AATGTGCCTT TTCTGAAGAG ATTGTGTTAG	1715
CTCCAAAGCT TTTCTATCG CAGTGTTTCA GTTCTTTATT TTCCCTTGTC GATATGCTGT	1775
GTGAACCGTC GTGTGAGTGT GGTATGCCTG ATCAGAGATG GATTTTGTTA TAAGCATCAA	1835
TGTGACACTT GCAGGACACT ACAACGTGGG ACATTGTTTG TTTCTCCAT ATTTGGAAGA	1895
TAAATTTATG TGTAGACTTT TTTGTAAGAT ACGGTTAATA ACTAAAATTT ATTGAAATGG	1955
TCTTGCAATG ACTCGTATTC AGATGCCTAA AGAAAGCATT GCTGCTACAA ATATTTCTAT	2015
TTTTAGAAAG GGTTTTTIATG GACCAATGCC CCAGTTGTCA GTCAGAGCCG TTGGTGTTTT	2075
TCATTGTTTA AAATGTCACC TGTAAAAAGG GCATTATTTA TGTTTTTTTT TTTGCTATCC	2135
TGATAATGT ATGTATTGTA TAAAGAACGT CTGTACATTG GGTATAACA CTAGTATATT	2195
TAAACTTACA GGCTTAITTG TAAGTAAAC CACCATTTTA ATGTACTGTA ATTAACATGG	2255
TTATAATACG TACAATCCTT CCCTCATCCC ATCACACAAC TTTTTTTGTG TGTGATAAAC	2315
TGATTTTGGT TTGCAATAAA ACCTTGAAAA ATAAAAAAA AAAAAAAAAA AAAAA	2370

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FIG. 2A

Met Thr Val Lys Thr Glu Ala Ala Lys Gly Thr Leu Thr Tyr Ser Arg
1 5 10 15

Met Arg Gly Met Val Ala Ile Leu Ile Ala Phe Met Lys Gln Arg Arg
20 25 30

Met Gly Leu Asn Asp Phe Ile Gln Lys Ile Ala Asn Asn Ser Tyr Ala
35 40 45

Cys Lys His Pro Glu Val Gln Ser Ile Leu Lys Ile Ser Gln Pro Gln
50 55 60

Glu Pro Glu Leu Met Asn Ala Asn Pro Ser Pro Pro Pro Ser Pro Ser
65 70 75 80

Gln Gln Ile Asn Leu Gly Pro Ser Ser Asn Pro His Ala Lys Pro Ser
85 90 95

Asp Phe His Phe Leu Lys Val Ile Gly Lys Gly Ser Phe Gly Lys Val
100 105 110

Leu Leu Ala Arg His Lys Ala Glu Glu Val Phe Tyr Ala Val Lys Val
115 120 125

Leu Gln Lys Lys Ala Ile Leu Lys Lys Lys Glu Glu Lys His Ile Met
130 135 140

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Pro Tyr Asp Arg Thr Val Asp Trp Trp Cys Leu Gly Ala Val Leu Tyr
275 280 285

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Ala Phe Leu Gly Phe Ser Tyr Ala Pro Pro Thr Asp Ser Phe Leu
420 425 430

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	